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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,737	12/18/2000	Giampiero Maggioni	856063.677	4179

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EXAMINER

GONZALEZ, JULIO C

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 11/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/740,737

Applicant(s)

MAGGIONI ET AL.

Examiner

Julio C. Gonzalez

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 12 September 2002 is: a) ☐ approved b) ☒ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The proposed drawing correction filed on 09/12/02 has been disapproved because it is not in the form of a pen-and-ink sketch showing changes in red ink or with the changes otherwise highlighted. See MPEP § 608.02(v).

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the sensors disclosed in claim 5 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. Claims 1-8 and 11-13 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The disclosures claims that the control unit is able to process, supply and predict later changes, yet no steps or structural information is given as to how the control unit is able to perform the tasks disclosed in the claims.

Also, claim 11 discloses that the system does not use a signal from an alternator, however, the specifications in page 7, lines 6-10 may imply that the present invention may or may not use a signal from an alternator depending on the situation, which one is it?

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-8 and 11-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the claim discloses that the voltage regulator receives a signal and at least one engine operation signal and "in response thereto to supply said voltage regulator with a signal corresponding to the engine operation". It may seem like if the voltage regulator receives a signal and sends a signal to itself. From what device is the signal coming and to what device is the signal going to?

In claim 11, what is meant by "without using a phase signal from the alternator"?

Is the signal from the alternator (voltage signal) not use at all in the system? Does the regulation voltage does not include inputs from the alternator? In what operation is the signal from the alternator not being used? Also, claims 3 and 4 may imply the opposite since as disclosed in the claims, the control unit is connected to the alternator to receive a voltage signal (claim 4) and in turn the voltage regulator is connected to the control unit (claim 3). It may seem like if the signal from the alternator is being used.

In order to advance prosecution in the merits, the Prior Art will be applied as best understood by the examiner.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4, 7, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable by Maruyama et al in view of Kohl et al and Kataoka.

Maruyama et al discloses a voltage regulator 3, a control unit 6, a thermal engine 100, an alternator 21 wherein the control unit 6 is connected between the thermal engine 100 and the voltage regulator 3 (see figure 1). Also, the control unit supplies the voltage regulator with a square wave signal (see figures 3, 4C, 4D, 4F).

However, Maruyama et al does not disclose explicitly having a system wherein the engine operation state may be used in controlling a voltage regulation.

On the other hand, Kohl et al discloses for the purpose of enabling the deactivation of the load responses upon rpm reduction with a simple circuit, a voltage regulator 22, a control unit 26 and wherein the voltage regulation is controlled by using the rpm of the engine (see claim 6).

However, neither Maruyama et al nor Kohl et al disclose explicitly that the signal from the alternator is not use in the regulating voltage.

On the other hand, Kataoka discloses for the purpose of effectively utilize the output of an engine that the voltage regulator 5 controls the current of the generator 3, a signal, indicate of the engine rpm, is applied from a sensor 4 to the voltage regulator 5 thus the voltage regulated to the regulator 5 is controlled (see constitution).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design a voltage regulating device as disclosed by Maruyama et al and to modify the invention by having the rpm of the engine affect the regulating voltage for the purpose of enabling the deactivation of the load responses upon rpm reduction with a simple circuit as disclosed by Kohl et al and to regulate the voltage based on the rpm (speed) of the engine for the purpose of effectively utilize the output of an engine as disclosed by Kataoka.

8. Claim 5, 6, 8 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama et al, Kohl et al and Kataoka as applied to claims 1, 2 and 12 above, and further in view of Iwatani et al.

The combined voltage regulating device discloses all of the elements above. However, the combined voltage regulating device does not disclose using sensors.

On the other hand, Iwatani discloses for the purpose of increasing the efficiency of fuel for vehicles and quickly charging the battery, a plurality of switches and buffers been used in a voltage regulator 3A (see figure 1). Also, sensors are used (see figure 1), which are dependent on the state of the engine (column 4, lines 66, 67).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the combined voltage regulating device as disclosed above and to modify the invention by using a plurality of sensors for the purpose of increasing the efficiency of fuel for vehicles and quickly charging the battery as disclosed by Iwatani.

Response to Arguments

10. Applicant's arguments with respect to claims 1-8, 11-13 have been considered but are moot in view of the new ground(s) of rejection.

11. In response to applicant's arguments, the recitation loop-type regulating device has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio C. Gonzalez whose telephone number is (703) 305-1563. The examiner can normally be reached on M-F (8AM-5PM).

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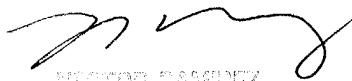
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Jcg

November 22, 2002


NESTOR RAMIREZ
SUPERVISOR
E.O. 14176-2000